

TEMPERATURE OF WATER.

The reader will find this element given in the table on the lower right-hand corner of Chart No. II. This table presents the maximum and minimum temperatures of the water at the various lake, river and sea-coast stations, the observations being taken at the bottom.

PRECIPITATION.

This item for April is exhibited on chart No. III, the figures giving the total amounts of rain and melted snow. The extraordinary excess of rain-fall recorded in March was not repeated in April. Still there is, generally, an excess of precipitation throughout the United States east of the Rocky Mountains. The only noteworthy exceptions to this remark are in the Ohio valley, in which the last month's rain-fall fell short of the usual quantity by more than one-half, *i. e.*, by 1.72 inches, and on the Lower Lakes, where the deficiency is an inch and a half. There was, on the contrary, a large excess (of 1.70 inches) in the South Atlantic States and an excess of about 1 inch in the Gulf States. Elsewhere the variation from the normal supply of rain is unimportant. On the 30th of April, at Fort Gibson, Indian Territory, occurred the very remarkable condensation of 4.54 inches of rain in four hours.

The number of days upon which rain or snow fell during the month, in the several districts, averages as follows: New England, 9; the Middle States, 13; South Atlantic States, 9; Eastern Gulf States, 7; Western Gulf States, 8; Lower Lake region, 13; Upper Lake region, 12; Ohio valley and Tennessee, 11; Upper Mississippi valley, 9; Lower Missouri valley, 12; Minnesota, 10 days.

HUMIDITY.

The average relative humidity for the different districts is as follows: For New England, 65 per cent.; Middle Atlantic States, 70 per cent.; South Atlantic States, 66; Eastern Gulf States, 69; Western Gulf States, 66; Lower Lakes, 67; Upper Lakes, 68; Ohio valley and Tennessee, 56; Upper Mississippi valley, 59; Lower Missouri valley, 60; Minnesota, 67.

WINDS.

The average direction of the wind at each station is indicated by the arrows on Chart II, the arrows being supposed to fly with the wind. The following figures show some of the highest and lowest totals of wind-movement for the whole month at the points named: Cheyenne, 14,112; Galveston, 10,008; Indianola, 10,565; Cape Hatteras, 10,992; Long Branch, 11,449; Peck's Beach, 10,916; Sandy Hook, 11,692; Nashville, 3,856; Mobile, 3,505; Lynchburg, 3,484; Augusta, 3,560. The prevailing winds were from northwest to southwest.

VERIFICATION OF PREDICTIONS AND CAUTIONARY SIGNALS.

A critical investigation shows—

(1) The average percentage of verification, for all the weather predictions issued telegraphically, is 87.2. The average percentage of omissions to predict is 0.6.

(2) The number of Cautionary Signals displayed during April, at all sea-ports and lake stations of the Signal office in the United States, was 146. Of this number 24 were not justified by the result; 122 were justified. The storm-warnings were, therefore, justified to the extent of 83 per cent.